

Claims

1. A method for producing a recombinant polypeptide comprising culturing a mammalian cell line, the cell line expressing a recombinant polypeptide in a production phase at a temperature at or below 29°C.
- 5 2. The method of claim 1, wherein the polypeptide is a Tumor Necrosis Factor Binding Protein (TBP), or a mutein or fragment thereof.
3. The method of claim 1 or 2, wherein the polypeptide is recombinant human TBP-1 or TBP-2.
4. The method of any of the preceding claims, wherein the mammalian cell line comprises a
10 DNA sequence coding for TBP-1 selected from the group consisting of
 - (a) A polypeptide comprising SEQ ID NO: 1;
 - (b) A mutein of (a), wherein the amino acid sequence has at least 40 % or 50 % or 60 % or 70 % or 80 % or 90 % identity to the sequence in (a);
 - (h) A mutein of (a) which is encoded by a DNA sequence, which hybridizes to the
15 complement of the native DNA sequence encoding (a) under moderately stringent conditions or under highly stringent conditions;
 - (i) A mutein of (a) wherein any changes in the amino acid sequence are conservative amino acid substitutions to the amino acid sequences in (a);
 - (j) A salt or an isoform, fused protein, functional derivative, active fraction or circularly
20 permuted derivative of (a).
5. The method of any of claims 1 to 3, wherein the mammalian cell line comprises a DNA sequence coding for TBP-2 selected from the group consisting of
 - (a) A polypeptide comprising SEQ ID NO: 2;
 - (b) A mutein of (a), wherein the amino acid sequence has at least 40 % or 50 % or 60 %
25 or 70 % or 80 % or 90 % identity to the sequence in (a);
 - (h) A mutein of (a) which is encoded by a DNA sequence, which hybridizes to the complement of the native DNA sequence encoding (a) under moderately stringent conditions or under highly stringent conditions;
 - (i) A mutein of (a) wherein any changes in the amino acid sequence are conservative
30 amino acid substitutions to the amino acid sequences in (a);
 - (j) A salt or an isoform, fused protein, functional derivative, active fraction or circularly permuted derivative of (a).
6. The method of any of claims 4 or 5, wherein the mammalian cell is cultured at a temperature between 20°C and 29°C.
- 35 7. The method of claim 6, wherein the mammalian cell is cultured at a temperature of about 25 to 29°C.

8. The method of claim 7, wherein the mammalian cell is cultured at a temperature of about 26°C, or about 27°C, or about 28°C.
9. The method of claim 7, wherein the mammalian cell is cultured at a temperature of about 29°C.
- 5 10. The method of any of the preceding claims, wherein the mammalian cell is a CHO cell line.
11. The method of any of the preceding claims, wherein the medium used during the production phase is serum free.
12. The method of any of the preceding claims, further comprising collecting the polypeptide
10 from the medium.
13. The method of any of the preceding claims, further comprising purifying the polypeptide from medium or cell derived components.
14. The method of any of the preceding claims, further comprising formulating the purified polypeptide with a pharmaceutically acceptable carrier.
- 15 15. The use of a temperature of 24, 25, 26, 27, 28 or 29°C for the production of a protein.
16. Polypeptide obtainable according to any of the preceding claims, the protein being mono-glycosylated.